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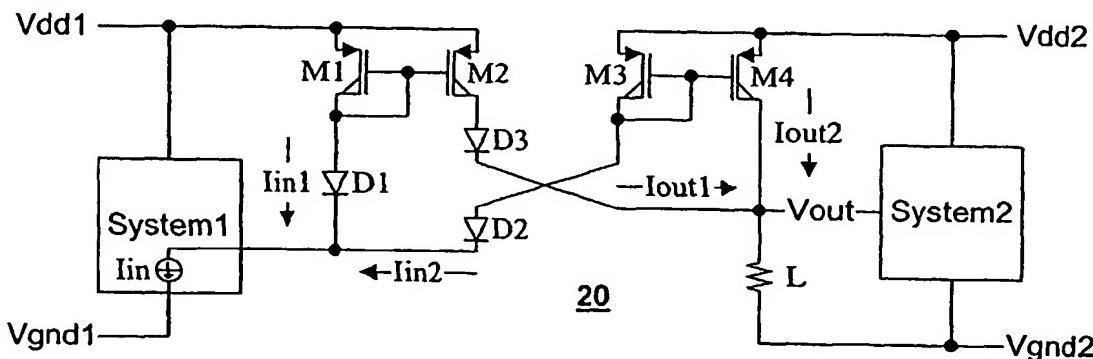
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(54) Title: LEVEL SHIFTING CIRCUIT BETWEEN ISOLATED SYSTEMS



(57) Abstract: A level shifting circuit (20, 30) couples an input current (I_{in}) from one system to another, isolated, system, by driving a single load (L) via one or more current mirrors of a common type. In a first embodiment (20), two similar type (either N-type or P-type) current mirrors ($M_1, M_2; M_3, M_4$) provide output current (I_{out1}, I_{out2}) to a common load. Diodes (D_1, D_2) are used to split the input current (I_{in1}, I_{in2}) between the two current mirrors during normal, non-faulty conditions, and to turn off either one of the two current mirrors during a fault condition to permit proper operation in the presence of a fault. In a second embodiment (30), a single current mirror (M_1, M_2) mirrors the input current (I_{in}) to the output load (L), and a pair of diodes (D_1, D_2) selects which of the isolated systems to use as the power source in the event of a fault.